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EXAMINER

WATKINS III, WILLIAM P

ART UNIT

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Application Number: 10/758,714
Filing Date: January 16, 2004
Appellant(s): YASSIN ALHAMAD, SHAIKH GHALEB MOHAMMAD

Michael W. Goltry
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 19 December 2006
appealing from the Office action mailed 26 July 2006.

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(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 13-16 and 31-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stock (U.S. 3,825,465) in view of Kinney (U.S. 3,12,864).

Stock teaches an expanded sheet material which may be made of plastics or paper or cardboard and which may be filled with tar products and an aggregate such as plaster (col. 2, lines 10-40). Kinney teaches the use of an expanded sheet material where the slits are transverse to the longitudinal direction of the sheet and intersect the edge of the sheet in order to be expanded into a three dimensional structure which has great

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strength and stiffness (page 2, lines 25-35, Figure 1). A compact intermediate form of the product is taught (Figures 3 and 2). The instant invention claims an expanded sheet material with tar and aggregate.

It would have been obvious to one of ordinary skill in the art to select a combination of tar and plaster from the possible coating and filler materials taught by Stock as options. It further would have been obvious to one of ordinary skill in the art to substitute the transverse slits of Kinney for the longitudinal slits of Stock in order to produce a strong structure because of the teachings of Kinney. Variation of the taught sheet materials with these coating and fillers would also have been obvious. Transportation of construction materials to a job site in a compact form for field assembly is well known in the construction art. It would have been obvious to one of ordinary skill in the art to transport the unexpanded mesh of Stock in view of Kinney in a common intermediate compact sheet material storage form such as a roll for field assembly and joining with aggregate and tar in order to have ease of transportation to the construction job site, in view of the above noted well known practice. Variation in the thickness and

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slit size and arrangement is taken as being within the ordinary skill of the art.

(10) Response to Argument

A. Response to Appellant's Arguments Regarding Independent Claim 13 Starting on Page 7 of the Brief

Pages 7-8 and most of 9 of the brief describe the limitations of instant claim 13, a general allegation that no motivation is provided to combine the references of the rejection and that there is a lack of teaching of all of the limitations of the claim in the rejection. Starting on page 9, the teachings of the Stock reference are discussed. At the bottom of page 9, appellant alleges that Stock requires reinforcement members in at least some of the apertures of the expanded sheet of Stock and that this in conflict with the limitation of claim 13 that requires each of the cells to have a filler of tar and sand. The examiner disagrees. Having a reinforcement member in the cells of Stock does not prevent the cells from having filler. This is clearly shown in Figure 4 of the reference, where there is filler in all of the cells including those that have reinforcements. The claim language only requires the tar and sand filler to be "disposed" in the

cells. It does not require that the cells be entirely filled with only the tar and sand composition. The instant claim language also does not exclude the presence of reinforcing members in the cells.

In the middle of page 11, appellant argues that the instant claimed slits that are transverse to the longitudinal dimension of the sheet cannot inherently have the expanded structure of Stock that allows insertion of reinforcing members. The examiner disagrees. The instant specification at Figure 3C clearly shows an expanded three-dimensional structure that forms a honeycomb-like structure. A reinforcing element could be threaded through adjacent apertures in this structure.

At the bottom of page 11, appellant argues that the sheet of Stock is formed by perpendicular distortion out of the plane of the web and would not be formed by a longitudinal extension of the web. Again the examiner disagrees. As noted at col. 3, lines 45-50 of Stock, as the web is made three dimensional it shrinks in the direction that the slits extend and as can be seen in Figure 5, must therefore expand in the direction that is perpendicular to the slits. This direction that is perpendicular to the slits is the longitudinal direction in the instant claimed invention. Thus an expansion in the

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longitudinal dimension as taught in the instant specification is not inconsistent with the formation of a three dimensional structure and the contraction in the direction parallel to the slits that is taught in Stock. In general the examiner notes that though a secondary reference has been used in the rejection to explicitly teach slits transverse to the longitudinal direction, the structure shown in Figure 5 of Stock is taught as being capable of forming a wall with the reinforcing elements bearing the load in compression (col. 4, lines 10-15). This implies the reinforcing elements running vertically in relation to the horizontal floor. If the width of a given wall is less than the height of the wall, the slits would run transverse to the longer dimension of the sheet.

Starting at the middle of page 12 to the middle of page 14, appellant argues that there is no teaching in Stock of a tar and sand mixture as a filler. Though there is not an explicit teaching of such a mixture, as explained at length in the response to appellant's arguments in the final office action mailed 26 July 2006, the position of the examiner is that there is ample implicit support for a tar and sand mixture.

Stock teaches use of tar and synthetic resin to stiffen the slit lattice (col. 2, lines 30-40) and filling the lattice cells with

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a plastic material (col. 2, line 13). The reference further teaches that the plastic material may be a plaster or a concrete (col. 4, lines 25-30) and that the plastic material may be an organic synthetic resin (col. 4, lines 35-50). Concrete is well known to comprise sand and other aggregate with an inorganic cement binder. Asphalt, which comprises sand or other aggregate in a tar or bitumen binder, is a well-known substitute for concrete in building and road fabrication. It would have therefore have been obvious to have used tar with sand as a plastic filler material as well as tar as a lattice stiffener, in view of these well known characteristics of concrete, asphalt and tar. There is thus a strong implied teaching of tar and sand that meets the instant claim limitations. The examiner notes that tar or bitumen is usually covered with an aggregate material as an outer layer to protect the tar as in roofing products. The examiner further notes that even if the tar is only applied as a stiffener, impregnation in the honeycomb material would result in some tar extending into the cells and coming in contact with a concrete filler which contains sand and other aggregate.

At the middle of page 14, appellant argues that Kinney teaches an open framework and that using a filler would thus

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destroy the function of the reference. The examiner does not seek to fill the cells of Kinney but merely transfers the explicit teaching of slits transverse to the longitudinal direction of expansion. Appellant also argues that the structure of Kinney must be corrugated. Again the examiner does not seek to transfer this teaching, but even if it was transferred the instant claim language does not preclude the use of corrugations. Appellant further argues that making the slits transverse to the longitudinal axis in Stock would destroy the function of Stock. This argument has been dealt with above.

B. Response to Appellant's Arguments Regarding Dependent Claims 14-16 on page 16 of the Brief

Appellant only argues that the dependent claims are allowable for the reasons given for independent claim 13.

C. Response to Appellant's Arguments Regarding Independent Claim 31 starting on page 16 of the Brief.

Appellant first recites the slit length and spacing limitations as well as the thickness limitation of claim 13. The examiner notes that Stock states that the adjacent lines can be separated by a width of 1/16 to 1 inch (col. 2, lines 45-50).

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This is equivalent to range of 1.58 to 25.4 millimeters, which overlaps the instant claimed range of 1 to 4 millimeters. The examiner further notes that the apertures of Stock can be a wide variety of shapes such as square or rectangular (col. 3, lines 35-40). The examiner notes that a square aperture would require slits of similar length and spacing that is different from the slit length and spacing of the more elongated shape of the preferred embodiment of Stock. Stock thus teaches slits that have dimensions the same order of magnitude as thus claimed and also teaches variation in the relative slit length to accomplish variation in aperture shape. The examiner notes that neither Stock nor Kinney explicitly teach the instant claimed thickness, but that both require web materials that are flexible so they can be expanded. The examiner thus takes the instant claimed thickness, which is for a flexible web, as being implicitly taught in the references and thus would have been obvious to one of ordinary skill in the art.

Starting at the bottom of page 17 to the middle of page 19 appellant repeats the arguments regarding filling all of the cells and not using reinforcing members that have been addressed above. Starting on the bottom of page 19 of the brief to page 22, appellant repeats the argument regarding the lack of a tar

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and sand filler that have also been addressed above.

Appellant's argument regarding thickness limitation starting at the bottom of page 20 has been addressed in the first paragraph of this section above. At the bottom of page 22, appellant repeats the arguments regarding Kinney being an open work that cannot be filled. These arguments have been addressed above.

D. Response to Appellant's arguments regarding Dependent Claims 32-35 on page 24 of the Brief.

Appellant only argues that the dependent claims are allowable for the reasons given for independent claim 31.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,




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